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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,770

09/15/2003

Steven S. Williams

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04/17/2006

QUARLES & BRADY LLP  
411 E. WISCONSIN AVENUE  
SUITE 2040  
MILWAUKEE, WI 53202-4497

EXAMINER

HANSEN, COLBY M

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/662,770

Applicant(s)

WILLIAMS, STEVEN S.

Examiner

Colby Hansen

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-22 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 22 is rejected under 35 U.S.C. 102(a) as being clearly anticipated by Bode (US Pat. 6,478,470).

Bode (US Pat. 6,478,470) discloses a bearing assembly (that could be used for a steering assembly) comprising an inner ring member (implicit); an outer ring member 1 encircling said inner ring member and defining a raceway space therebetween said outer ring member including a lubrication groove 8 formed in said outer ring member 1 between at least two axially spaced outer race surfaces (fig. 1); flanges 2,3 and a plurality of rollers, said rollers including a concave radial race surface interposed between axially spaced radial race surfaces 6,7.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson (US Pat. 1,973,994) in view of Bode (US Pat. 6,478,470).

Peterson (US Pat. 1,973,994) discloses a shaft (applicant's recitation of a steering shaft is an intended use recitation, therefore the shaft/bearing assembly of Peterson (US Pat. 1,973,994) must merely be capable of use within a steering assembly, which it is) bearing assembly comprising: an inner ring member 25 including a convex inner race surface having opposing axial edges; an outer ring member 15 encircling said inner ring member and defining a raceway space therebetween, said outer ring member including at least two axially spaced outer race surfaces; a flange 28a (fig. 3) axially outwardly spaced from each outer race surface extends radially inwardly past said outer race surfaces; a plurality of rollers 14 disposed in said raceway space between said flanges each of said rollers 14 including a concave radial race surface interposed between axially spaced radial race surfaces, each of said axially spaced radial race surfaces engaging one of said axially spaced outer race surfaces of said outer ring member and said concave radial race surface engaging said inner ring member convex inner surface.

However, Peterson (US Pat. 1,973,994) does not disclose a lubrication groove formed in said outer ring member between at least two axially spaced outer race surfaces.

Bode (US Pat. 6,478,470) teaches a bearing assembly having an outer ring member including a lubrication groove formed in said outer ring member between at least two axially spaced outer race surfaces.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the lubrication groove formed in an outer ring member between two axially spaced outer race surfaces as taught by Bode (US Pat. 6,478,470) within the bearing assembly of Peterson so as provide the bearing with additional lubricant reservoir

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which is easy to make and does not enlarge the axial dimension of said bearing (col. 1/lines 45-50).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ai (US Pat. 6,354,745) in view of Bode (US Pat. 6,478,470).

Ai (US Pat. 6,354,745) discloses a shaft (figs. 4-5)(applicant's recitation of a steering shaft is an intended use recitation, therefore the shaft/bearing assembly of Ai (US Pat. 6,354,745) must merely be capable of use within a steering assembly, which it is) bearing assembly comprising: an inner ring member 30 including a convex inner race surface having opposing axial edges; an outer ring member 32 encircling said inner ring member and defining a raceway space therebetween, said outer ring member including at least two axially spaced outer race surfaces defining a lubrication reservoir therebetween; a plurality of rollers 34 disposed in said raceway space between said flanges each of said rollers 34 including a concave radial race surface 42 interposed between axially spaced radial race surfaces, each of said axially spaced radial race surfaces engaging one of said axially spaced outer race surfaces of said outer ring member and said concave radial race surface engaging said inner ring member convex inner surface.

However, Ai (US Pat. 6,354,745) does not disclose a lubrication groove formed in said outer ring member between at least two axially spaced outer race surfaces.

Bode (US Pat. 6,478,470) teaches a bearing assembly having an outer ring member including a lubrication groove formed in said outer ring member between at least two axially spaced outer race surfaces.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the lubrication groove formed in an outer ring member between two axially spaced outer race surfaces as taught by Bode (US Pat. 6,478,470) within the bearing assembly of Ai (US Pat. 6,354,745) so as provide the bearing with additional lubricant reservoir which is easy to make and does not enlarge the axial dimension of said bearing (col. 1/lines 45-50).

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bode (US Pat. 6,478,470), further in view of Diedrich (US Pat. 5,080,502).

Bode (US Pat. 6,478,470) discloses the claimed invention except for a collar fixed to each end of said inner bearing for “unitizing” the seal/shaft/bearing assembly.

Diedrich (US Pat. 5,080,502) teaches a radial rolling bearing comprising an inner ring, an outer ring, radial rolling bearings, flanges axially outwardly spaced from each outer race surface extending radially inwardly past said outer race surfaces, a seal spaced axially outwardly from each axial end of said rollers and disposed between said inner and outer ring members to seal said rollers between said inner and outer ring members a collar fixed to each axial end of said inner ring member to unitize said bearing assembly; said flanges including radially inwardly opening groove and said collars including a circumferential groove opening toward said radially inwardly opening groove of said flanges, and said seal including an outer radial edge engaging said radially inwardly opening groove of said flanges and an inner radial edge engaging said circumferential groove for the purpose of having an economic, easily manufactured bearing sealing assembly (col. 1/lines 30-36).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the inner ring assembly as taught by Diedrich (US Pat. 5,080,502) within Bode (US Pat. 6,478,470) so as have an economic, easily manufactured bearing sealing assembly, as suggested by Diedrich (US Pat. 5,080,502) (col. 1/lines 30-36).

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson (US Pat. 1,973,994) in view of Bode (US Pat. 6,478,470), as applied to claim 22, further in view of Diedrich (US Pat. 5,080,502).

Peterson (US Pat. 1,973,994) discloses the claimed invention except for a collar fixed to each end of said inner bearing for "unitizing" the seal/shaft/bearing assembly.

Diedrich (US Pat. 5,080,502) teaches a radial rolling bearing comprising an inner ring, an outer ring, radial rolling bearings, flanges axially outwardly spaced from each outer race surface extending radially inwardly past said outer race surfaces, a seal spaced axially outwardly from each axial end of said rollers and disposed between said inner and outer ring members to seal said rollers between said inner and outer ring members a collar fixed to each axial end of said inner ring member to unitize said bearing assembly; said flanges including radially inwardly opening groove and said collars including a circumferential groove opening toward said radially inwardly opening groove of said flanges, and said seal including an outer radial edge engaging said radially inwardly opening groove of said flanges and an inner radial edge engaging said circumferential groove for the purpose of having an economic, easily manufactured bearing sealing assembly (col. 1/lines 30-36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the sealing assembly as taught by Diedrich (US Pat. 5,080,502) within Peterson (US Pat. 1,973,994) so as have an economic, easily manufactured bearing sealing assembly, as suggested by Diedrich (US Pat. 5,080,502) (col. 1/lines 30-36).

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ai (US Pat. 6,354,745) in view of Bode (US Pat. 6,478,470), as applied to claim 22, further in view of Diedrich (US Pat. 5,080,502).

Ai (US Pat. 6,354,745) discloses the claimed invention except for a collar fixed to each end of said inner bearing for "unitizing" a seal/shaft/bearing assembly.

Diedrich (US Pat. 5,080,502) teaches a radial rolling bearing comprising an inner ring, an outer ring, radial rolling bearings, flanges axially outwardly spaced from each outer race surface extending radially inwardly past said outer race surfaces, a seal spaced axially outwardly from each axial end of said rollers and disposed between said inner and outer ring members to seal said rollers between said inner and outer ring members a collar fixed to each axial end of said inner ring member to unitize said bearing assembly; said flanges including radially inwardly opening groove and said collars including a circumferential groove opening toward said radially inwardly opening groove of said flanges, and said seal including an outer radial edge engaging said radially inwardly opening groove of said flanges and an inner radial edge engaging said circumferential groove for the purpose of having an economic, easily manufactured bearing sealing assembly (col. 1/lines 30-36).



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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the sealing assembly as taught by Diedrich (US Pat. 5,080,502) within Ai (US Pat. 6,354,745) so as have an economic, easily manufactured bearing sealing assembly, as suggested by Diedrich (US Pat. 5,080,502).

### *Response to Arguments*

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

### *FACSIMILE TRANSMISSION*

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MEP. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

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Responses submitted by facsimile transmission should include a Certificate of Transmission (MEP. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 872-9306) on \_\_\_\_\_

(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_

\_\_\_\_\_

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MEP. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

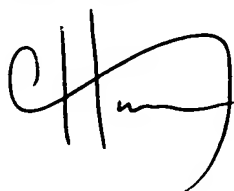
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (571) 272-7105. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley, can be reached on (571) 272-6917. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

Colby M. Hansen

Patent Examiner

 9/13/06

  
RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER  
SUPERVISORY PATENT EXAMINER  
RICHARD RIDLEY